Environmental Resources Trust

Uniform National Standard for

EcoPower® Renewable Energy Certificates

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Acknowledgments

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Preface

In 1999, the Environmental Resources Trust (ERT) launched its EcoPower® certified Renewable Energy Certificate (REC) program to help catalyze the renewable energy market in the United States. Our goal was to stimulate the market for renewable energy by connecting buyers and sellers and overcoming geographic and transactional barriers. We have since certified over 500,000 megawatt hours of renewable energy, stimulated demand for green power by industries, local governments and the federal government, and helped bring additional renewable energy sources online. Approximately 45% of all EcoPower® RECs certified to-date represent new renewable generation brought online after 1998[1]. Today, even as renewable energy technologies have become increasingly cost-competitive, the U.S. renewable energy market remains small, and electricity consumers still face significant barriers in purchasing renewable energy. In order to stimulate increased generation and use of renewable energy, the market needs clear standards for RECs, and for this reason ERT is proud to issue this *Uniform National Certification Standard for EcoPower® RECs*.

A REC is a market-based commodity designed to facilitate transactions between buyers and sellers of renewable energy, free from the constraints of the electricity grid. Once electrons are placed on the grid, they are irreversibly mixed with electrons from other generators as they flow along the continuously changing path of least resistance. Electricity customers all consume a composite mix of electrons generated from all of the power plants connected to the grid. Rather than requiring buyers of renewable energy to have a direct cable to a renewable generator, RECs unbundle the renewable attributes from the electrons. The price paid for the REC is effectively financial support for the inclusion of a renewable resource in the grid's overall generation portfolio.

Renewable Energy Benefits

The generation of electricity with renewable energy resources results in real environmental benefits as well as other benefits such as:

- Reduced reliance on imported fuels and increased energy security
- Reduced price volatility in energy markets
- Improved grid reliability from distributed generation
- Technological innovation and learning
- U.S. economic development and job creation

[1] Our new uniform standard increases the requirement to 100% new beginning January 1, 2007

One of the more important environmental benefits of the increased use of renewable energy is that it can lead to reductions in emissions of pollutants. These emission reductions may be direct or indirect, for example:

- **Indirect reductions** of air and water emissions are caused when renewable energy sources displace demand for electricity generated from other more polluting sources, such as fossil fuel combustion[2]
- **Direct reductions** of greenhouse gas emissions result when a powerful greenhouse gas is converted onsite by the renewable energy generator into a less potent greenhouse gas (e.g., the generation of electricity through the combustion of landfill gas methane to carbon dioxide).

The distinction between the ***direct*** and ***indirect*** emission reductions is an important, and often overlooked one. As an environmental organization that encompasses market-based programs for both renewable energy and greenhouse gas emissions, ERT wants to ensure that the fundamental accounting framework for RECs and voluntary or mandatory emissions trading markets are consistent and viable. ERT's expertise in air pollution trading markets, including cap and trade programs such as the U.S. EPA's Acid Rain program and the Kyoto Protocol, as well as voluntary trading programs, has led ERT to make a transparent distinction between ***direct*** and ***indirect*** emission reductions in the EcoPower® REC Standard. ERT EcoPower® RECs include no rights or claims to ***direct*** emission reductions or allowances unless these are specifically attached[3]. EcoPower® RECs do transfer to the buyer any and all rights or claims to any ***indirect*** emission reductions that may have occurred due to the displacement of fossil-fueled electricity generation by renewable electricity generation. The magnitude of these indirect emission reductions are not quantified or certified with an EcoPower® REC.

Fundamentally, EcoPower® RECs represent unique and exclusive proof that one MWh of electricity has been generated from a qualifying renewable resource connected to the grid, and conveys ownership over the renewable energy attributes of that energy. ERT communicates this clearly to stakeholders, and purchasers of EcoPower® RECs understand that they are not buying claims to direct emission reductions. This definition removes a problematic source of uncertainty from REC markets, and therefore allows them to function in harmony with emission trading markets.

[2] The WRI/WBCSD GHG Protocol defines indirect emissions as "emissions that are a consequence of the activities of the company but occur as sources owned or controlled by another company."
[3] Allowances may be attached to a REC but the actual allowance itself is normally a separate commodity, contained in a registry. Verified emission reductions require substantiating data and a third party verification report and must be based on a transparent baseline analysis, which goes well beyond the scope of a certification exercise.

ERT supports and has actively verified the direct emission reduction claims of renewable energy generators. However, in keeping with market realities and legal convention, ERT recognizes that the markets for direct emission reductions and RECs are separate. We believe that recent EPA guidance[4] on the appropriate use of RECs to convey limited claims over indirect emission reductions is a workable solution. In accordance, EcoPower® RECs include right to make claims about indirect reductions and allows buyers to use indirect claims to offset their indirect emissions. However, ERT does not believe that average emission factors are the best approach to measure grid displacement so we continue to require a rigorous substantiation analysis before we will quantify the indirect emissions impact of renewable energy generation. [5]

Environmental Integrity and RECs

Trading indirect emission reductions can lead to serious double counting problems when direct and indirect emission reductions are confused or equated. Indirect emission reductions may be used to offset indirect emissions i.e., a company may use indirect emission reductions to offset its indirect emissions associated with its electricity usage. However, a company may not offset its direct emissions with indirect emission reductions. For example, indirect emissions reductions may not be used to offset the direct emissions of a company's vehicle fleet. When direct and indirect emission reductions are used interchangeably, double counting occurs because indirect emission reductions always point to some other entity's direct emission reductions.

In mandatory or compliance-based cap-and-trade emission trading programs, double counting is not tolerated. In such systems, "allowances" or permits to emit a capped pollutant are issued by the government and allocated to a unique owner. Emission reduction "credits" are likewise created by a designated governmental authority and allocated to a unique owner, typically a project developer. A registry is used to track ownership of emission allowances and credits as they are traded to ensure that double counting cannot occur. These emission allowances and credits can be contractually bundled with the sale of a REC, but are nevertheless distinct legal commodities.

In the future, ERT envisions a vibrant REC market that co-exists alongside a variety of mandatory emissions trading markets. This is currently the case with sulfur dioxide allowances in the United States and the rules under the European Union's trading program make a distinction between emission allowances and RECs. Only in the U.S. voluntary markets are these tradable commodities sometimes confused.

[4] http://www.epa.gov/climateleaders/docs/bryson0505.pdf
[5] Information collected by ERT during the certification process will be made available to the buyer in the case that they intend to generate their own estimates of indirect emission performance.

This confusion in the U.S. voluntary market about the rules for accounting and assigning "emission reduction credits" is understandable given the lack of standardization or clear government policy, though we hope this will soon change. In the United States, numerous companies have taken a voluntary or self-imposed target on their greenhouse gas emissions. This is widely praised by environmentalists who encourage companies to embrace sustainability. However, the rules for emissions accounting are often unclear, boundaries remain flexible, and many companies are experimenting with different types of metrics to measure progress and evaluate potential projects to offset emissions. The result is a lack of uniformity in accounting standards and variability in standards for verifying claims of environmental performance.[6] The WRI/WBCSD GHG Protocol addressed this problem by creating a distinction between direct and indirect emissions (i.e., Scope 1 and 2/3).

ERT believes that, to the extent possible, renewable energy generators should realize the financial benefits associated with the environmental benefits they achieve. To this end, ERT has pioneered a quantification methodology to measure the emission reductions achieved by renewable generation's displacement of fossil fuel generation. This methodology enabled Montgomery County, MD to be the first county in the United States to receive regulatory credit (i.e., credit under a State Implementation Plan) for purchase of wind energy RECs. The methodology would also serve as a sound basis for a genuinely valuable set aside or generation-based allocation of emission allowances to renewable energy generators in future cap-and-trade programs. ERT believes that renewable energy generators should receive greater support from governments, and would strongly support the allocation of valuable emission allowances to renewable energy generators in future cap and trade programs.

Initiatives like the one in Montgomery Country open new opportunities for renewable energy generators to be recognized for their environmental contributions by receiving – via governmental allocation and recognition – real value for their environmental performance. Again, the emission allowance is not contained in the REC or authorized by ERT – it is created by regulatory processes and is a discrete allowance in just the same way that a sulfur dioxide allowance is not contained in a REC. In this way ERT is helping to expand the market for renewable energy use without compromising the market for emission trading.

The document that follows presents ERT's *Uniform National Certification Standard for EcoPower® RECs*.

[6] For this reason, ERT developed the Corporate Greenhouse Gas Verification Guideline (www.ert.net)

Environmental Resources Trust

Uniform National Standard for EcoPower® Renewable Energy Certificates

§1 Introduction

1. The generation of electricity from renewable energy sources results in valuable environmental benefits, including reduced land and water impacts, as well as improved air quality. These benefits accrue, in part, because the deployment of renewable energy capital often displaces fossil-fired generation.

2. A Renewable Energy Certificate (REC) is a market-based commodity designed to facilitate transactions between buyers and sellers of renewable energy, free from the constraints of the electricity grid. By unbundling the renewable characteristic from the actual electricity commodity, RECs allow renewable energy generators more flexibility in the distribution of their products, and therefore encourages further development of the renewable energy market.[7]

3. RECs were developed to broaden the potential customer base by overcoming the geographic and transactional barriers confronting green power procurement. Often the best sites for green power generation, such as wind farms, are not located in the service territory of a utility serving a densely populated urban area. By de-linking financial support for renewable energy from the physical delivery of the electricity, RECs not only reflect the realities of the transmission grid, but are also a vehicle for electricity purchasers to provide clear and direct financial signals in support of renewable electricity.

4. One of the primary objectives of Environmental Resources Trust (ERT) is to support the development of the renewable energy industry, and thereby produce a net benefit for the environment. To help accomplish this objective, ERT has developed this uniform national standard for EcoPower® RECs.

§2 Definitions

5. The following definitions hold for the purpose of this standard:
   a) **Audit**: The confirmation, through provision of objective evidence by an independent party, that a specific quantity of electricity has been generated that meets the requirements of this standard.
   b) **Biomass fuel**: A solid, liquid, or gaseous fuel used to derive energy from the combustion or electro-chemical reaction (as in a fuel cell) of hydrocarbon materials of a biogenic origin. Biomass fuel materials include, but are not limited to, animal wastes (e.g., manure) and plant materials (e.g., wood chips, waste paper, and crop wastes). These materials may be converted to a gaseous fuel, such as in landfills (i.g.,

[7] Although unbundled from the actual electricity produced that is associated with them, RECs may be sold as a bundled product with the sale of other electricity products.

landfill gas) or waste treatment facilities (i.e., digester gas), or to liquid fuels (e.g., biodiesel).

c) **Certification**: A formal process by which ERT approves that an electricity generator's energy product meets the requirements of the EcoPower® REC standard.
d) **Direct emissions**. Pollutants that are physically emitted by equipment or processes that function to produce electricity from other forms of energy.
e) **EcoPower® Renewable Energy Certificate (REC)**: A transferable commodity, sold separately from the electricity (i.e., unbundled), but representing the unique and exclusive proof that one megawatt hour (MWh) of electricity has been generated that is consistent with the requirements of this standard.
f) **EcoPower® logo**: The certification mark; registered and owned by Environmental Resources Trust, Inc.
g) **Eligible renewable energy sources**: Qualifying sources of renewable energy, as defined by §3 of this standard.
h) **Eligible renewable energy generation**: Electricity generated, as defined by §5 and §7 of this standard.
i) **Fossil fuels**: Energy sources derived from natural gas, coal, or petroleum based fuels.
j) **Geothermal energy**: Hot water or steam extracted from geothermal reservoirs in the Earth's crust that is supplied to steam turbines to drive generators to produce electricity.
k) **Generating unit**: Any combination of physically connected generators, reactors, boilers, combustion turbines, and other prime movers operated together to produce electric power.
l) **Gross generation**: The total amount of electric energy produced by generating units and measured at the generating terminal in kilowatthours (kWh) or megawatthours (MWh).
m) **Hydropower**: The use of flowing water to produce electrical energy.
n) **Indirect emissions**: Pollutants emitted to the atmosphere that are affected by the activity of a particular generator or facility, but are produced and emitted from other generators or facilities. Reductions in indirect emissions from the generation of electricity from renewable energy sources often involve the backing down of fossil fuel-fired generation sources.
o) **Line losses**: The amount of energy lost during transmission and distribution of electricity, primarily from the resistance heating of the wires as current passes through them.
p) **Low-impact hydropower**: Electricity generated from a generation units certified by the Low Impact Hydropower Institute.[8] Alternatively, electricity generated from one or more turbines operating behind a single dam or individual in-stream turbines with a total generating capacity of less than 30 megawatts and that meets other criteria such as minimum impact on river flows, water quality, fish passage, and watershed protection.
q) **Net generation**: The amount of gross generation less the electrical energy consumed at the generating station(s) for station service or auxiliaries.
r) **Nuclear energy**: Electricity generated by the use of the thermal energy released from the fission of nuclear fuel in a reactor.

[8] http://www.lowimpacthydro.org/cert_program.asp

s) **Renewable energy**: Electricity supplied from energy resources that are naturally replenishing but flow-limited. They are virtually inexhaustible in duration but limited in the amount of energy that is available per unit of time. Typical renewable energy resources include: biomass fuels, hydro, geothermal, solar, wind, wave, and tidal.
t) **Renewable Portfolio Standard (RPS)**: A State or federal level policy that requires a certain amount of the electricity generated and distributed to retail customers to come from approved renewable energy sources.
u) **Retirement**: The use of an EcoPower® REC, as defined by §11 of this standard, which prohibits any future transfers of the REC.
v) **Solar energy**: Electricity derived from the sun through either the photoelectric effect, referred to as photovoltaics, or through thermal energy generation. Solar thermal systems may also be used to simply heat water.
w) **Tidal and wave energy**: Electricity derived from the flow of ocean water through a reversible turbine or other mechanical device.
x) **Wind energy**: Electricity derived from the rotation of aerodynamic wind blades turning the shaft of an electric generator. The kinetic energy present in wind motion causes the blades to rotate.

§3 Size and amount

6. Each EcoPower® REC represents one megawatt-hour of electricity generated. EcoPower® RECs must be sold as a complete unit and are not divisible in to fractional certificates. EcoPower® RECs are based on the net generation of electricity by a grid connected generation unit and are not adjusted for line losses.

§4 Eligible renewable energy sources

7. Electricity associated with EcoPower® RECs must be generated from renewable energy sources that have a net environmental benefit in terms of the release of pollution to or degradation of air, water, or land. Each EcoPower® REC will specify the type of renewable resource used in its generation and the location of that renewable resource. ERT defines electricity generated using the following renewable energy sources as eligible for EcoPower® RECs:
    a) Wind energy
    b) Solar energy (thermal and photovoltaic)
    c) Tidal and wave energy
    d) Biomass fuel sources meeting the additional criteria defined in §5.
    e) Geothermal energy
    f) Low-impact hydropower
    g) Hydrogen fuels derived from other eligible renewable energy sources

8. Analogously, electricity produced from the following energy sources are ineligible for EcoPower® RECs:
    a) All fossil fuels
    b) Nuclear energy
    c) Hydropower not meeting the low-impact definition
    d) Ineligible biomass fuels, as defined in §5.

9. ERT reserves the right to evaluate each request from generators for EcoPower® RECs based on ERT's own environmental impacts assessment of the project.

10. ERT recognizes the electricity benefit of certain solar water heating systems, when electricity is directly displaced. See annex E.

§5 Additional criteria for biomass fuel sources

11. In addition to the criteria provided in §4, the production of electricity from biomass fuels must meet the following criteria to the satisfaction of ERT:
    a) In cases where generators have influence or control over the management decisions of the raw biomass resource (e.g., timberland), generators should strive to manage biomass resources on a sustainable basis.
    b) The harvesting or use of biomass resources should be done in a way that does not lead to long-term damage to existing ecosystems.
    c) The use of biomass fuels to produce electricity must not lead to a long-term (i.e., 20 to 50 years) net increase in greenhouse gas emissions to the atmosphere relative to a historical baseline. The baseline will be defined by the greenhouse gas emissions from pre-existing activities associated with that biomass resource, as constrained by existing government regulations.
    d) Direct emissions of air quality pollutants (e.g., CO, NO_x, NMVOCs, SO_x, particulates, and air toxics) on a per MWh basis from the generation of electricity using biomass fuels should, in general, be less than that of the generation being displaced on the electricity grid. However, it is acceptable that emissions of some air quality pollutants may actually increase (e.g., VOCs from biogas operations).
    e) Operations involving the production of electricity from biomass fuels must be in compliance with all applicable environmental regulations and laws.

12. ERT will evaluate requests from generators for EcoPower® RECs against the criteria listed in Section 4 of this standard and document findings in a Prospective Environmental Report.

13. The following biomass fuels are typically deemed eligible for EcoPower® RECs:
    a) Plants and parts of plants
        i) Straw
        ii) Hay and grass
        iii) Leaves, wood, roots, stumps, bark
        iv) Crops (e.g. maize)
    b) Biomass wastes, products, and by-products
        i) Industrial waste wood (waste wood from woodworking and wood processing operations and waste wood from operations in the wood materials industry)
        ii) Used wood (used products made from wood, wood materials) and products and by-products from wood processing operations
        iii) Forestry residues
        iv) Animal, fish and food meal, fat, oil and tallow
        v) Primary residues from the food and beverage production
        vi) Manure
        vii) Agricultural plant residues
        viii) Sewage sludge

ix) Biogas produced by digestion, fermentation or gasification of biomass
x) Landfill gas

c) Fuels whose components and intermediate products have all been produced from biomass
i) Bioethanol
ii) Biodiesel
iii) Etherised bioethanol
iv) Biomethanol
v) Biodimethylether
vi) Bio-oil (a pyrolysis oil fuel) and bio-gas

14. Analogously, the following biomass fuels are typically deemed ineligible for EcoPower® RECs unless ERT has concluded that their use will lead to minimal pollution releases to the environment:
a) Biomass fraction of municipal and industrial waste[9]
b) Biomass fraction of flotsam from waterbody management
c) Biomass fraction of processed municipal and industrial wastes
d) Wood waste coated with paints, plastics, other fossil-fuel based coatings, or any preservative or pesticide regulated by the EPA or another State or Federal agency
e) Wood wastes that have been treated for preservation with materials containing halogens, chlorine, halide compounds, copper arsenate, creosote, or any other toxic material
f) Harbor sludge and other waterbody sludges and sediments
g) Biomass fraction of textile wastes
h) Biomass fraction of paper, cardboard, pasteboard
i) Peat and peat derived fuels

§6 Eligible renewable energy generation

15. Each EcoPower® REC represents one megawatt-hour of electricity generated from an eligible grid-connected generating unit and renewable energy source. At least 50 percent of the electricity associated with each EcoPower® REC must be produced by "new" generating units. Beginning January 1, 2007, 100 percent of the electricity associated with each EcoPower® REC must be produced by "new" generating units.

16. In order to qualify under the EcoPower Standard, a new generating unit must have begun operation, or have been repowered, on or after 1 January 1998. Repowered units are eligible if at least 80 percent of the fair market value of the generation equipment derives from new equipment installed on or after 1 January 1998 as part of the repowering.

§7 Ineligible renewable energy generation

17. Electricity generated from eligible renewable energy sources and generation units is still ineligible for EcoPower® RECs if:

[9] Because the combustion of municipal solid waste typically produces significant emissions of toxic elements, such as mercury, it is not classified as an eligible biomass energy source.

a) The electricity generated is already counted towards the requirements of a mandatory government-sponsored renewable portfolio standard, except where specifically sanctioned by State or other applicable laws.[10]
b) The electricity generated is already marketed or sold in any way as "renewable" or "green power" on the wholesale or retail market, including as part of any State or regional public disclosure law.
c) The electricity generated is purchased by a retail customer who is already claiming the purchase of renewable energy for disclosure or marketing purposes.
d) The generation of electricity from a renewable energy source was mandated or otherwise required by any local, State, or federal agency, including any voluntary consent agreements.
e) The construction of the specific generating unit was mandated by any local, State, or federal agency.

18. Electricity generated from eligible renewable energy sources in excess of any government mandate (e.g., RPS) is eligible for EcoPower® RECs.

19. Electricity generation units receiving tax or other financial incentives from a government agency are eligible for EcoPower® RECs.

§8 Determination of eligibility and expiration of RECs

20. Upon request by a generator, ERT will determine the eligibility of a generator with the provisions of this standard. To gain eligibility, generators must agree to ERT's EcoPower® License Agreement (see Annex B).

21. Once a generator as been determined to be eligible by ERT, new EcoPower® RECs are eligible for sale once the electricity associated with them has been generated. EcoPower® RECs are certified on an annual (12 month) cycle. EcoPower® RECs expire 2 months after the end of the of the previous annual certification cycle. Upon expiration, EcoPower® RECs may no longer be sold or transferred.

22. At the end of each calendar year, or some alternative pre-determined annually reoccurring date, the sale of EcoPower® RECs is audited against actual generation data (see §10).

23. Generators are not eligible for EcoPower® RECs if there is not a clear legal ownership of the RECs in keeping with all applicable local, State, and federal laws and regulations. ERT will not certify RECs in cases where there is disputed legal claim involving competing rights to a REC, and reserves the right to revoke previously certified RECs if ownership disputes later emerge.

§9 Attestation requirements

24. A signed letter of attestation, supplied by the generator or generator's agent, must support all requests for certification of EcoPower® RECs (see Annex C for template). This letter

[10] EcoPower® may be used, where sanctioned by State or other applicable laws, for load serving entities to meet their requirements under a renewable portfolio standard.

must be submitted each year to ERT by March 1st for the EcoPower® RECs produced in the previous calendar year.

§10 Audit and certification

25. Within 30 days of receipt of a generators attestation statement ERT will perform an annual audit of all EcoPower® RECs produced or sold during the previous calendar year, considering the following criteria:
    a) Information provided in marketing materials and other marketing claims are consistent with this standard.
    b) Attestation letters are complete and signed.
    c) Generation of electricity has been accurately metered and records are consistent with the number of RECs produced or sold.
    d) Generation records are consistent with data submitted to State and other government regulators.
    e) All other eligibility requirements under this standard have been met.

26. Generators must provide sufficient information to ERT so that all EcoPower® RECs can be audited. Failure to provide this information will result in RECs not being certified.

27. Generators have until March 1st to compensate for any deficit in actual generation of eligible electricity relative to the number of EcoPower® RECs that have been produced or sold in the previous year. Generators will also be expected to adjust their marketing claims to reflect any audit findings.

28. Following the successful auditing of information provided by the generator, ERT will certify its EcoPower® RECs and issue a letter of certification (see Annex D). EcoPower® RECs that are not certified by ERT are invalid and may not be sold or transferred.

§11 REC retirement

29. Holders of EcoPower® RECs that take any of the following actions cause the RECs associated with those actions to be retired:
    a) The REC has been used to make claims for marketing or public disclosure purposes regarding renewable energy purchases or use.
    b) The REC has been used in some form to meet any local, State, federal or other government mandate or legal requirement for renewable energy.

30. Once retired, EcoPower® RECs may not be sold or otherwise transferred under any circumstances.

§12 Notification and disclosure

31. Purchasers or holders of EcoPower® RECs who use them in a way that leads to their retirement, as defined in §11, may claim to have purchased renewable energy, including statements regarding the percentage of their total electricity purchases that was renewable.[11]

[11] Line losses may be disregarded for the purpose of this calculation.

Holders of EcoPower® RECs agree to notify ERT when actions are taken leading to the retirement of EcoPower® RECs.

32. Purchasers or holders of EcoPower® RECs who use them in a way that leads to their retirement, as defined in §11, may use EcoPower® logo in marketing materials. Persons using the EcoPower® logo must submit any materials containing the logo to ERT. ERT reserves the right to revoke the use of the EcoPower® logo and any rights to claim the purchase of EcoPower® RECs at any time. In practice, ERT will only do so under circumstances where ERT judges that deceptive or unethical activities are being undertaken by an EcoPower® REC seller or purchaser.

33. Following the transfer of an EcoPower® REC, the owner of the generator or other associated parties may not claim, for marketing purposes, that the electricity associated with that REC was produced from a renewable energy source. Generators may claim that generated electricity which has not been and will not be used to produce EcoPower® RECs is renewable. Generators may also claim that the generating assets they own are renewable, regardless of the certification of EcoPower® RECs.

34. Generators or other holders of EcoPower® RECs may not make claims regarding attributes of an EcoPower® REC that are not specified in this standard.

35. Generators or other holders of EcoPower® RECs agree to immediately notify ERT following the violation of any aspect of this standard.

36. ERT reserves the right to notify any past or potential purchaser of EcoPower® RECs of actions taken by an electricity generator that lead to the loss of eligibility to market and sell EcoPower® RECs. Generators shall make available to ERT contact information on all purchasers of EcoPower® RECs.

§13 Ownership of Emission Property Rights

37. EcoPower® RECs are unbundled from and do not include or convey any property rights associated with direct emission reductions resulting from the generation of electricity from renewable energy sources. All current or future government granted emission allowances or reduction credits for air or other emissions (e.g., sulfur dioxide and NOx allowances under the U.S. EPA's Acid Rain Program) are separate commodities, which may be sold or transferred apart from EcoPower® RECs. The initial allocation of any emission allowances or reduction credits is a function of government laws and regulations, and is not contractually affected by the transfer of RECs.

38. Marketers of EcoPower® RECs may not claim that EcoPower® RECs include ownership rights of current or future government granted emission allowances or reduction credits for air or other emissions. Such claims can not be substantiated from a legal perspective.

39. EcoPower® RECs do transfer to the buyer any and all rights or claims to any indirect emission reductions that may have occurred due to the displacement of fossil-fueled electricity generation by renewable electricity generation. The magnitude of these indirect emission reductions are not quantified or certified with an EcoPower® REC.

Generators wishing to quantify the likely indirect emission reductions associated with the generation of grid-connected electricity from renewable energy sources may request that ERT prepare a substantiation analysis of these reductions (see Annex A).

§14 Contact information

For inquiries regarding ERT's EcoPower® Program and/or EcoPower® RECs please contact:

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Annex A: Substantiation of Indirect Emission Reductions

1. Substantiation is a technical analysis of the emission reduction benefits resulting from the generation and consumption of electricity associated with EcoPower® RECs. Substantiation is an optional service provided by ERT for generators who wish to estimate the likely net direct and indirect emission reductions associated with the past generation of electricity associated with particular EcoPower® RECs.

2. A substantiation analysis typically focuses on the indirect air emissions associated with the displaced electricity generation on the grid and direct air emissions. These indirect emissions are estimated using a dispatch margin analysis, which approximates and prioritizes the particular generation units that are most likely to be backed down by as a result of the generation of electricity associated with specific EcoPower® RECs. The dispatch margin analysis is accomplished in several steps:
    a) Identification of the power plants operating on the margin through review of historical generation emissions and operational data.
    b) Ranking of marginal operating power plants based on localized marginal pricing, utility interviews, etc.
    c) Match up of electricity generation from renewable generation units with specific marginal operating power plants.
    d) Estimation of air emissions from the displaced generation from the most recent 12 months of data from the EPIndex™ database created by Resource Systems Group. This database provides up to date emissions and generation data for all the major power plants in the United States, including data from the EPA Acid Rain Program's Emissions Tracking System and accounts for any specific pollution control technology used. Air emission estimates do not consider emissions associated with the extraction or transportation of fuels.[12]

3. The data sources of the dispatch margin analysis are as follows, in order of priority:
    a) Continuous Emissions Monitors (CEMs) required by U.S. EPA under Clean Air Act and reported to U.S. EPA by plant and or individual unit. These data are usually available for CO_2, NO_x, and SO_2 for most large fossil fueled power plants.
    b) Other emissions data reported to U.S. EPA and published by the EPA.
    c) Best available engineering estimates. Many air pollutants, including most of the air toxics, are calculated using best available engineering estimates with equipment specific emissions factors at the plant or unit level. The estimation procedure used in these reports selects the most appropriate air emissions factor for specific fuels, boiler type, firing and burner system, turbine or engine. The estimated emission rate is a controlled rate based on reported or standard air pollution composition data usually at the plants specific level. For oil-fired air emissions, sulfur content data is used.

[12] The inclusion of upstream fuel processing and transport emissions is likely to increase the indirect emission reductions associated with the generation of electricity from most renewable energy sources.

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Annex B: EcoPower® Retail License Agreement

ECOPOWER® RETAIL LICENSE AGREEMENT

This EcoPower® Retail License Agreement ("Agreement") is made by and between The Environmental Resources Trust, Inc., a District of Columbia nonprofit corporation ("ERT") and the undersigned licensee ("Licensee") (collectively referred to herein as the "Parties"). The effective date of this Agreement is the date of the last Party's signature ("Effective Date").

RECITALS

A. ERT is the owner of the ECOPOWER® service mark and certain associated design or logos, as more specifically set forth on Exhibit A hereto (the "Marks").

B. In order to promote the improvement of the environment through the development of renewable energy sources and the use of renewable energy, ERT has developed a Uniform National Standard for EcoPower® Renewable Energy Certificates (the "EcoPower® Standard"), pursuant to which ERT may certify the generation of renewable energy that is eligible to be marketed and sold as EcoPower® Renewable Energy Certificates ("RECs"), subject to the terms and conditions of the EcoPower® Standard, including without limitation the requirement that any use of the Marks be pursuant to this Agreement.

C. Licensee has received (or has sought and believes in good faith that it will receive) a determination of eligibility from ERT pursuant to the EcoPower® Standard.

D. Licensee desires to use the Marks in connection with the retail sale of EcoPower® Renewable Energy Certificates (as defined in the EcoPower® Standard) (the "Product").

E. Licensee and ERT both desire and agree to enter into this Agreement granting Licensee the non-exclusive right to use the Marks in connection with the marketing and sale of the Product in the Territory (as defined herein).

NOW, THEREFORE, in consideration of the mutual promises, undertakings and covenants set forth herein, the Parties hereby agree as follows:

1. Grant of License. ERT hereby grants to Licensee a non-exclusive, non-assignable, non-sublicensable, non-transferable royalty-free right and license to use the Marks in the [United States] (the "Territory") in connection with the retail marketing and sale of the Product for the Term (as defined herein) under the terms and conditions set forth herein (the "License"). All rights not specifically granted hereunder shall be considered excluded from the grant of the License and herein reserved by ERT.

2. Effective Date, Duration and Renewal. This Agreement shall continue for an initial term of one (1) year beginning on the Effective Date, unless sooner terminated as provided otherwise herein or as agreed by the Parties (the "Initial Term"). Except as otherwise provided herein, this agreement shall automatically renew for successive terms of one year (each such term, a "Renewal Term") (the Initial Term and Renewal Term shall be collectively referred to herein as the "Term") until either Party gives written notice of termination to the other Party specifying a date, not less than thirty (30) days following the date of the notice, upon which this agreement shall terminate.

3. Trademark Protection.

3.1 Ownership of the Marks. Licensee acknowledges and agrees that ERT has informed Licensee that ERT is the owner of the Marks. Licensee acknowledges and agrees that Licensee's use of the Marks shall inure to the benefit of ERT for trademark purposes. Nothing contained in this Agreement shall be construed as an assignment or grant to Licensee of any right, title or interest in or to the Marks, or any of ERT's other trademarks, it being understood that all rights relating thereto are reserved by ERT, except for the Licensee hereunder to License of the right to use and utilize the Marks only as specifically and expressly provided herein.

3.2 Cooperation. Licensee agrees to take no actions to violate ERT's rights in and to the Marks.

3.3 Validity of the Marks. Licensee agrees that it will not, during the Term or thereafter, attack ERT's title or rights in and to the Marks or attack the validity of this Agreement or the Marks.

3.4 Infringement. Licensee shall promptly notify ERT in writing of any uses of which Licensee is aware which may be infringements or imitations by others of the Marks on products or in connection with services similar to those covered by this Agreement. ERT shall have the sole right to determine whether or not any action shall be taken on account of any such infringements or imitations and Licensee shall not institute any suit or take any action on account of such infringements or imitations without first obtaining ERT's written consent to do so.

4. Trademark Notice. Licensee agrees that all marketing materials using any Mark shall bear appropriate legends and/or notices as specified by ERT from time to time. Licensee agrees that, unless otherwise expressly approved or specified by ERT in writing, each use of the Marks on such marketing materials shall be followed by the symbol shown next to that Mark as shown on Exhibit A hereto, and the following legend shall appear at least once on such materials:

> [Insert Mark] is a trademark of The Environmental Resources Trust, Inc. and is used under license by [Insert name of Licensee].

5. Quality Control.

5.1 Quality and Standards. Licensee agrees that the Product covered by this Agreement will be, as applicable, developed, generated, marketed and sold in accordance with all applicable laws and regulations and in accordance with the terms of the EcoPower® Standard (including without limitation the provisions of Section 12 of the EcoPower® Standard) and any certificates or determinations issued by ERT thereunder; and that the quality and policy of marketing and sale by Licensee shall be of a high standard. Licensee agrees to provide ERT with representative samples of marketing materials using any of the Marks prior to initial use of such materials.

5.2 No Injury to the Marks. Licensee shall not directly or indirectly, make any statement or engage in any act or failure to act which violates ERT's rights in the Marks.

5.3 Approval by ERT. Upon reasonable notice to Licensee (but in no event less than five (5) days), Licensee shall permit ERT to have appropriate access to its premises and personnel during normal business hours, and shall furnish or permit inspection of all materials bearing, containing or used in connection with the Marks or otherwise deemed appropriate by ERT (including but not limited to examination of the marketing and sales materials relating to the Product) for the sole purpose of ensuring that Licensee complies with the provisions of this Section and the quality standards set forth in this

Agreement; provided, however, that ERT shall not unreasonably disrupt Licensee's business with such access and inspection. During any such inspection, ERT shall cause all of its employees, agents, subcontractors and representatives to obey all of Licensee's generally applicable rules for the safe, orderly and efficient conduct of operations on Licensee's premises.

5.4 Failure to Comply with Quality Standards; Cure Period. In the event that ERT determines that Licensee has failed to comply with the quality standards set forth in this Agreement, Licensee shall have thirty (30) days from the date upon which Licensee receives written notification from ERT of such failure in which to cure such deficiencies (the "Cure Period"). If Licensee fails to cure the deficiencies during the Cure Period, ERT shall have the right to terminate this Agreement effective immediately upon the expiration of the Cure Period.

6. Termination.

6.1 Termination by Either Party. A Party may terminate this Agreement: (i) pursuant to Section 2 of this Agreement; (ii) upon thirty (30) days' written notice to the other Party, in the event that such other Party commits a breach or is in default of any provision of this Agreement and said breach or default is not cured to the terminating Party's satisfaction within such thirty day period; or (iii) immediately upon written notice to the other Party, if such other Party becomes insolvent, makes a general assignment for the benefit of creditors, tiles a voluntary petition of bankruptcy, suffers or permits the appointment of a receiver for its business or assets, or becomes subject to any proceedings under any bankruptcy or insolvency law, whether domestic or foreign, or has wound up or liquidated, voluntarily or otherwise, or makes written admission of an inability to pay its debts generally as they come due.

6.2 Effect of Termination. Upon termination of this Agreement for any reason: (i) the License granted hereunder shall immediately revert back to ERT; (ii) except as permitted below, Licensee shall immediately cease and refrain from further use of the Marks or any further reference to the Marks, either directly or indirectly; (iii) unless termination is pursuant to clause (ii) or (iii) of Section 6.1 above, Licensee, for the remaining term of any then outstanding written contract or agreement under which Licensee has agreed to sell and deliver the Product to a third party, may continue to use the Marks in connection with the sale of such Product under such agreement, provided that Licensee is not in violation of any of the terms and conditions of this Agreement.

7. Miscellaneous.

7.1 Transfer or Assignment. This Agreement or any rights or obligations hereunder may not be sublicensed, transferred or assigned by Licensee to any third party, except with ERT's prior written consent, and any such sublicense, transfer or assignment without consent shall be deemed void.

7.2. Confidentiality. During the term of this Agreement and for a period of one (1) year thereafter, each Party shall retain as confidential all proprietary business information of the other Party marked as proprietary or confidential by the disclosing party, and shall not disclose such information to any third party without the disclosing party's prior written consent. The foregoing restriction shall not apply to information that (i) was already in the possession of the receiving party prior to its disclosure by the disclosing party, (ii) is publicly available, (iii) is obtained by the receiving party from a source who was not under a confidentiality obligation to the disclosing party, or (iv) must be disclosed by law, regulation or judicial order.

7.3 Remedies. Each Party acknowledges that there is no adequate remedy under this Agreement or at law in the event of breach of Sections 1 (Grant of Licensee), 3 (Trademark Protection), 4 (Trademark Notice), 5 (Quality Standards) and 7.2 (Confidentiality) of this Agreement and that, in such circumstances, the other Party would be entitled to seek a decree of specific performance or injunctive or other equitable relief, including interlocutory, preliminary or permanent injunctive relief, without any

requirement to post a bond or other security. The Parties also acknowledge that the rights and remedies under this Agreement and under the law are intended to be cumulative, and not mutually exclusive.

7.4 Relationship of the Parties. Nothing contained in this Agreement shall be construed to imply a joint venture, partnership or principal-agent relationship between the Parties and neither Party by virtue of this Agreement shall have any right, power or authority, express or implied, to act on behalf of or enter into any undertaking binding the other Party.

7.5. Third Party Beneficiaries. There are and shall be no third party beneficiaries of this Agreement unless expressly identified as such herein.

7.6 Notices. Any and all written notices permitted or required to be given under this Agreement shall be deemed duly given (i) upon actual delivery, if delivery is by hand, (ii) upon receipt by the transmitting party of confirmation if delivery is by telegram or facsimile or (iii) upon delivery into the United States mail, if delivery is by first class postage paid, registered or certified, return-receipt-requested mail. Each such notice shall be sent to the representative of the respective Party or his successor at the address indicated below or to any other address as the respective Party may designate by notice delivered pursuant to this Section (provided that any such notice changing the address for receipt of notices shall only become effective upon actual receipt):

if to ERT, then to:

The Environmental Resources Trust, Inc.
1612 K Street, N.W., Suite 1400
Washington, D.C. 20006
Attention: Executive Director
Fax: (202) 785-2739
Confirmation: (202) 785-8577

if to Licensee, then to the address shown on the signature page hereto.

7.7 Non-Waiver. No term or provision hereof shall be deemed waived or any breach excused, unless such waiver or consent shall be in writing and signed by the Party claimed by the other to have waived or consented. Any consent by any Party to, or waiver of, a breach by the other, whether express or implied, shall not constitute a consent to, waiver of, or excuse for any other different or subsequent breach.

7.8 Partial Invalidity. If any term or provision of this Agreement shall be found to be illegal or unenforceable, then notwithstanding such illegality or unenforceability, this Agreement shall remain in full force and effect and such term or provision shall be deemed to be deleted.

7.9 Entire Understanding. This Agreement, together with those portions of the EcoPower® Standard incorporated or referenced herein, represents the entire understanding between the Parties hereto with respect to the subject matter hereof and this Agreement supercedes all previous presentations, understandings or agreements, oral or written, between the Parties with respect to the subject matter hereof and cannot be altered, amended or modified except by a written instrument signed by the duly authorized officer or representatives of each Party.

7.10 Counterparts. This Amendment may be executed in any number of counterparts and by the different Parties hereto on separate counterparts, each of which, when so executed and delivered, shall be an original, but all such counterparts shall together constitute but one and the same instrument and counterparts may be effected by means of facsimile transmission with the same effect as if original copies had been delivered.

7.11 Governing Law. All disputes between ERT and Licensee with respect to this Agreement shall be addressed and adjudicated in a federal or state court located within the District of Columbia, and the Parties hereby waive any objection either could raise with respect to the convenience, suitability or appropriateness of such forum. This Agreement shall be governed by and construed in accordance with the laws of the District of Columbia as if entered into and fully performed therein without regard to the laws regarding conflicts of laws.

7.12 Incorporation of Recitals. The recitals set forth above are incorporated by reference as if fully set forth herein.

7.13 Survival. Sections 3.1, 3.2, 3.3, 6, and 7 shall survive any termination or expiration of this Agreement. The rights and liabilities of the Parties hereto will bind and inure to the benefit of their respective assignees, successors, trustees and administrators, as the case may be.

IN WITNESS HEREOF, the Parties have caused this Agreement to be executed by their duly authorized representatives as of the date and year first written above.

LICENSOR

THE ENVIRONMENTAL RESOURCES TRUST, INC.

By:_____

Name:_____

Title:_____

LICENSEE

Name of Licensee:_____

By:_____

Name:_____

Title:_____

Licensee Contact Information

Mailing Address: _____

Facsimile: _____

Contact Person: _____

Email: _____

Website (if any): _____

EXHIBIT A

EcoPower Service Mark:

ECOPOWER®

EcoPower Logo Marks:

Annex C: EcoPower Attestation Statement

EcoPower Attestation Statement

Generation Facility Information:
Name of Generation Facility: _____
Owner of Facility: _____
Address of Facility: _____
_____
Facility ID Number[13]: _____ EIA or QF? (circle one)
Contact Person: _____
Title: _____
Telephone: (_____) _____ Fax: (_____) _____
Year of Generation: _____
Select Eligible Renewable Energy Resource Used in this Facility:

	Wind energy
	Solar energy
	Tidal and wave energy
	Geothermal energy
	Low-impact hydropower
	Biomass fuel sources meeting the additional criteria defined in §5 of the EcoPower® Standard
	Hydrogen fuels derived from other eligible renewable energy sources

Maximum Generating Capacity: _____
Date Facility was First Operational: _____
Date of Repowering (if applicable): _____
Net Generation Claimed for the Reporting Period:

Month	***kWh produced***
January	
February	
March	
April	
May	
June	
July	
August	
September	

[13] Please enter Energy Information Administration (EIA) identification number for the generating facility. If the facility does not have an EIA number, please enter the utility-assigned Qualifying Facility (QF) identification number.

Month	*kWh produced*
October	
November	
December	
TOTAL	

Total Generation in MWh: _____

Declaration:

I, (print name and title) _____, declare that:

1. The _____ megawatt hours (MWhs) of renewable electricity claimed above were generated at the aforementioned facility which is an eligible grid-connected generating unit and renewable energy source as detailed in the ERT Uniform National Standard for EcoPower® RECs;
2. The quantity of electricity claimed above is not in excess of the net generation of the generating facility during the indicated time period.
3. (Seller) _____ has a unique and uncontested claim to the renewable energy claimed above and to any RECs associated with that energy.
4. At least 50 percent of the electricity claimed above was produced by "new" generating units as defined in the EcoPower® REC Standard, or, for the purposes of REC certification, the electricity claimed above will be aggregated with renewable energy from at least one other source until at least 50 percent of the total electricity claimed was produced by suitable "new" generating units as defined in the EcoPower® REC Standard;
5. The EcoPower® RECs arising from this attestation are unbundled from and do not include or convey any property rights or allowances associated with direct emissions reductions resulting from the generation of electricity from renewable energy sources;
6. The electricity claimed above has not already been:
    a. Associated with any other EcoPower® REC or any REC certified under any other standard.
    b. Marketed or sold in any way as "renewable" or "green power" on the wholesale or retail market, including as part of any State or regional public disclosure law.
    c. Counted towards the requirements of a mandatory government-sponsored renewable portfolio standard, except where specifically sanctioned by State or other applicable laws.
    d. Purchased by a retail customer who is already claiming the purchase of renewable energy for disclosure or marketing purposes.
7. Neither the generation of the renewable electricity claimed above nor the construction of the associated generation facilities were mandated or otherwise required by any local, State, or federal agency, including any voluntary consent agreements.

As an authorized agent of (Seller) _____,
I attest that the above statements are true and correct.

Name_____
Title_____

Signature_____Date_____

Annex D: EcoPower Certification Template

EcoPower Certification Statement:
<<YEAR>> Generation

- *This EcoPower® Certification Statement provides proof of generation of [QUANTITY] MWh of electricity from [TYPE OF ELIGIBLE RENEWABLE ENERGY **SOURCE**] at the [NAME OF PLANT] plant owned and operated by [OWNER/OPERATOR] and located at [ADDRESS]. This certificate entitles the bearer to claim ownership of [QUANTITY] distinct EcoPower® Renewable Energy Certificates (RECs).*

- *Each EcoPower® REC represents unique and exclusive proof that one MWh of eligible renewable energy generation has been generated from an eligible renewable source connected to the grid, consistent with the Environmental Resources Trust ("ERT") Uniform National Standard for EcoPower® Renewable Energy Certificates in effect as of the date hereof. Each EcoPower® REC further represents proof that the seller has transferred to the buyer indicated on the reverse side any and all rights or claims to indirect emissions reductions caused by any displacement of fossil fueled electricity generation that may have occurred as a result of such renewable energy generation. No emission allowances, emission credits, or property rights arising from direct emission reductions related to such renewable energy generation are included in any EcoPower® REC referenced herein.*

- *ERT is the owner of the EcoPower® service mark and certain associated designs or logos. The owner of the EcoPower® RECs referenced herein may obtain from ERT a royalty-free license to use the EcoPower® mark is connection with the sale of these EcoPower® Certificates to retail electricity customers. The owner may not use the EcoPower® mark except in strict accordance with a license from ERT. To obtain a royalty-free right to use the EcoPower® mark, contact ERT at 202-785-8577 or write ERT at 1612 K Street NW, Suite 1400, Washington, D.C. 20006.*

- *Upon use (retirement) of the total number of MWh of RECs indicated on this certification statement, the owner is to punch the statement in the location indicated and forward a copy of the front and back of the statement to ERT. The RECs referenced herein are then retired and this statement is to be kept on record by the owner for audit purposes.*

- *For additional information about EcoPower® or The Environmental Resources Trust, Inc., please visit www.ert.net or call 202-785-8577*

punch

Date Used (Retired) _____

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Annex E: Inclusion of Solar Thermal Water Heating Systems

ERT accepts solar thermal water heating systems as potentially eligible renewable energy sources. Each application for certification will be evaluated on a case-by-case basis, and ERT reserves the right to reject applications that fail to meet our criteria. Each system must be installed and permitted according to all applicable local building codes. Each system must also be metered to measure the solar energy imparted to the water that is actually used (e.g., not the energy which is lost to the environment while in a holding tank or in pipes). At this point in time, non-metered performance verification methods will not be accepted. In the future, ERT is open to examining the possibility of using other methods which are proven to be reliable.

Solar Water Heating RECs represent solar energy which backs down fossil fueled electricity usage on the electric grid. Eligible solar water heating systems must replace or partly replace *grid-connected electric* water heating systems. Solar water heating systems backing down natural gas or oil fired hot water systems are not eligible for certification.

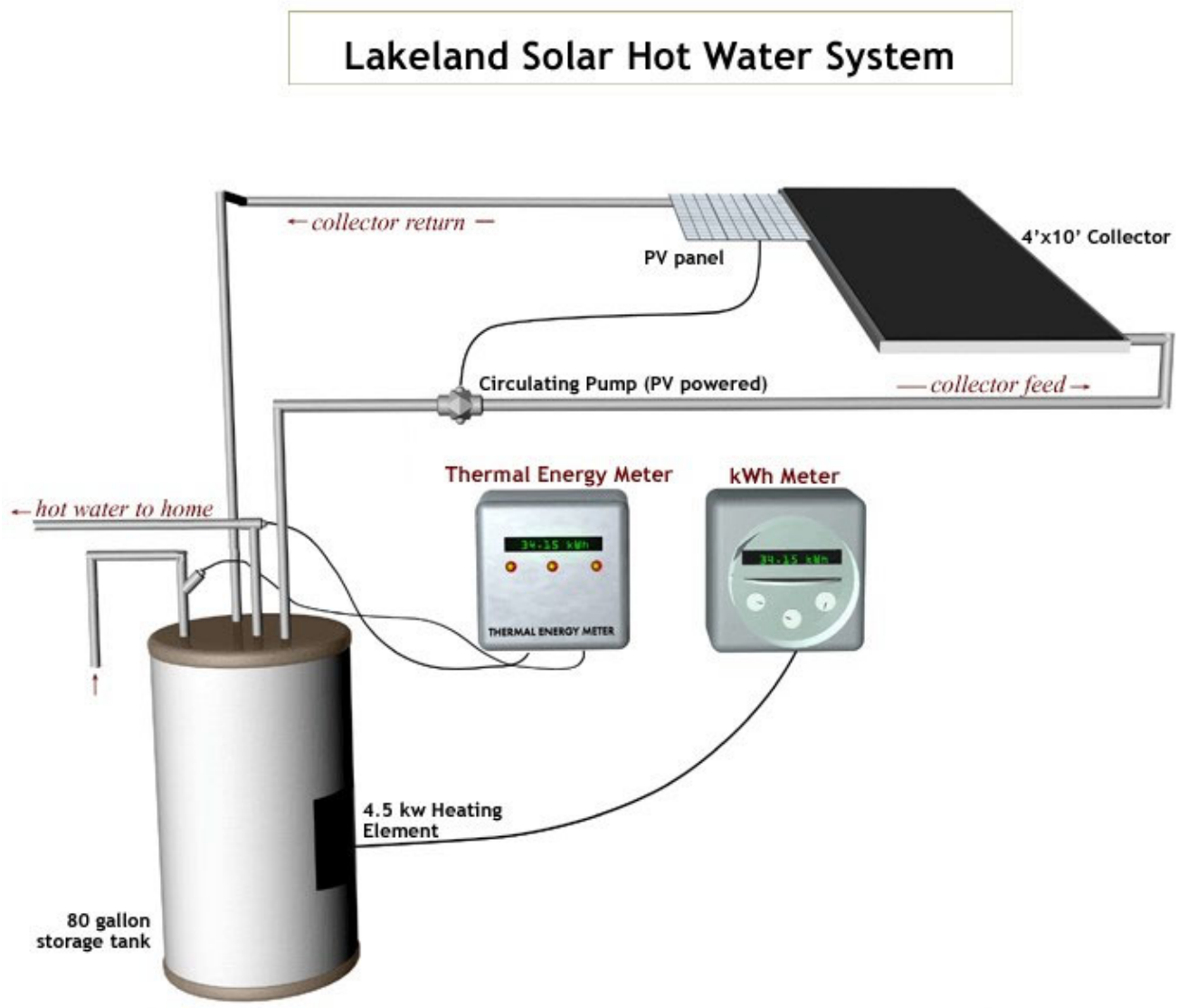
With respect to solar water heating RECs, references throughout the Standard to "electricity" should be interpreted as "utilized thermal energy." The thermal energy is measured in MWh, the same units used for electricity, another form of energy.

In all other aspects, solar thermal water heating RECs are treated and certified in the same way as any other EcoPower® REC.

This annex supersedes any other references to solar thermal water heating systems made in the Standard.

A case study and sample calculation for a solar water heating system follows.

Case Study: Lakeland Electric Solar Water Heating System



In this system, developed by Lakeland Electric, a Florida based electric utility company, water circulates from an 80-gallon storage tank through a roof-mounted solar water-heating panel, and back into the storage tank. The pump responsible for the circulation is powered by a dedicated 5W solar PV panel also mounted on the roof. A 4.5 kW electric heating element, on its own circuit, is activated when additional heating is required. As cold water enters the tank, a meter mounted on the exterior of the building records its temperature. The temperature of the hot water leaving the tank is also measured by the same meter, as is the flow rate, which is measured by a flow meter mounted next to the storage tank. Any electricity used by the 4.5 kW electric heater is measured and recorded by a separate meter, also mounted on the exterior of the building.

With this information, it is possible to calculate the amount of energy that was transferred to the water leaving the storage tank. The energy used by the electric heater can then be subtracted, leaving only the energy harnessed by the solar water-heating panel. A sample calculation follows:

Someone in the building turns on the hot water faucet and hot water flows for 1 minute before stopping. Over the course of that minute, we record an inlet (cold water) temperature of 15 degrees C and an outlet (hot water) temperature of 60 degrees C. We also record a volumetric flow of 7 Liters of hot water coming out of the tank to be used in the building. Water has a density of 1000 kg/m^3 and a specific heat of 4186 J/kg°C. With this information, we can now perform the calculation:

$$7L \bullet \frac{1m^3}{1000L} \bullet \frac{1000kg}{1m^3} \bullet \frac{4186J}{1kg°C} \bullet (60°C - 15°C) = 1.319\text{x}10^6 \text{ Joules}$$

A Joule is equivalent to 1 watt-second. We can now easily convert to kWh.

$$1.319\text{x}10^6 \text{ J} \bullet \frac{1\,\text{W} \cdot \text{sec}}{1\,\text{J}} \bullet \frac{1h}{3600\,\text{sec}} \bullet \frac{1kW}{1000\text{W}} = 0.366kWh$$

The thermal energy meter installed by Lakeland Electric performs these calculations in real time and displays the accumulated energy in units of kWh. Over the course of a certain month, let us assume that the meter records 450 kWh of thermal energy. Let us also assume that the auxiliary electric meter connected to the electric heating element measures 60 kWh of energy used by the heating element in that month. By subtracting the energy used by the electric heating element from the total thermal energy measured by the thermal energy meter, we can calculate the net energy harnessed by the solar water heater and used in the building.

$$450kWh - 60kWh = 390kWh$$

Therefore, in this month, 390 kWh of energy would be eligible for EcoPower® certification.

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Annex F: Case Studies for Biomass Generation

Separate case studies are under development:

Example 1: Landfill gas capture and utilization with GHG baseline based on regulatory additionality analysis.

Example 2: Anaerobic digestion with the GHG baseline created relative to methane emissions from confined animal feed operations and nitrous oxide emissions resulting from land application of manure and lagoon sludge.

Example 3: Poultry litter power generation via direct combustion and GHG baseline created relative to methane emissions from poultry farm and nitrous oxide emissions resulting from land application of poultry litter.

Example 4: Co-firing wood waste in a fossil fuel power plant with fossil fuel consumption records available to quantify GHG reductions.

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Annex G: Attached Environmental Assets (draft)

In order for the REC market to flourish, buyers and sellers of RECs should be in complete agreement as to what exactly is included in the purchase of a REC. To increase market transparency and to ensure that buyers and sellers have an explicit understanding of what is and is not transferred with a REC, the following checklist provides a summary of relevant contracted terms attached to or conveyed with this REC or block of RECs. Additional documentation may be required.

The following environmental assets are attached (check all that apply).

❑ Indirect emission reductions due to displacement of grid-connected, fossil-fueled electrical power generators.

The seller agrees to relinquish all claims to any uncapped indirect emission reductions or credits that may or may not be associated with this block of renewable energy. The seller agrees to transfer to the buyer the rights to make claims for, or pertaining to, the following environmental assets:

Yes ❑ No ❑ : displaced CO2 emissions
Yes ❑ No ❑ : other uncapped pollutants (specify): _____

❑ Quantified direct reductions of greenhouse gas emissions (e.g. methane destruction). (Baseline analysis and verification report required.)

Verified direct emission reductions attached to this REC or block of RECs include:

Yes ❑ No ❑ : verified CO2 emission reductions (carbon dioxide)
Yes ❑ No ❑ : verified CH4 emission reductions (methane)
Yes ❑ No ❑ : verified N2O emission reductions (nitrous oxide)
Yes ❑ No ❑ : other verified GHG emission reductions (specify):_____

❑ Allowances, credits or tradable permits issued by an authorized regulatory agency.

Additional environmental assets attached to this REC or block of RECs include:

Yes ❑ No ❑ : CO2 allowance or credit (additional documentation required)
Yes ❑ No ❑ : NOX SIP credit (additional documentation required)
Yes ❑ No ❑ : SO2 allowance (additional documentation required)
Yes ❑ No ❑ : other authorized credits or allowances (specify): _____

❑ Agreement to handover specific environmental benefits that may be awarded in the future.

The seller agrees to transfer any rights to make claims on any allowances or credits associated with this block of renewable energy that may be issued by an authorized regulatory authority in the future. The seller agrees to provide the buyer with reasonable assistance in making any such claims.

Yes ❑ No ❑